

*IBM SPSS Statistics - Essentials for R:  
Installation Instructions for Windows*

**IBM**



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# IBM SPSS Statistics - Essentials for R: Installation Instructions for Windows

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## IBM SPSS Statistics - Essentials for R: Installation Instructions for Windows

The following instructions are for installing IBM® SPSS® Statistics - Essentials for R on Windows operating systems.

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### Overview

IBM SPSS Statistics - Essentials for R provides you with tools you need to start developing custom R applications for use with IBM SPSS Statistics. It includes the following:

1. The IBM SPSS Statistics - Integration Plug-in for R for IBM SPSS Statistics 22
2. A set of working examples of R applications for IBM SPSS Statistics

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### Install the IBM SPSS Statistics application

IBM SPSS Statistics - Essentials for R is designed for the following applications:

- IBM SPSS Statistics for Windows
- IBM SPSS Statistics Server for Windows

There are no additional operating system and hardware requirements. The components installed with IBM SPSS Statistics - Essentials for R work with any valid IBM SPSS Statistics license.

If you have not already done so, follow the instructions provided with the software to install one of the IBM SPSS Statistics applications on the computer where you will install IBM SPSS Statistics - Essentials for R. If you are installing IBM SPSS Statistics - Essentials for R on a desktop machine, install IBM SPSS Statistics 22 on the desktop machine. If you are installing IBM SPSS Statistics - Essentials for R on a server machine, install IBM SPSS Statistics Server 22 on the server machine.

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### Download and install R 2.15

Version 22 of IBM SPSS Statistics - Essentials for R requires R version 2.15 (version 2.15.2 is recommended) . Install R on the computer where you will install IBM SPSS Statistics - Essentials for R. It is available from <http://www.r-project.org/>. You can also download it directly from <ftp://ftp.stat.math.ethz.ch/Software/CRAN/bin/windows/base/old/> .

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### Download and install IBM SPSS Statistics - Essentials for R

Be sure to use a version of IBM SPSS Statistics - Essentials for R that is compatible with the version of IBM SPSS Statistics on your machine. Within a major version of IBM SPSS Statistics, such as 22, you must use a version of IBM SPSS Statistics - Essentials for R that has the same major version. It is not necessary to uninstall earlier versions of IBM SPSS Statistics - Essentials for R before installing a newer version.

For users who are working in distributed mode (with IBM SPSS Statistics Server) please install IBM SPSS Statistics - Essentials for R on both the client and server machines.

Download version 22 of IBM SPSS Statistics - Essentials for R, available from the SPSS Community at <http://www.ibm.com/developerworks/spssdevcentral>.

Windows XP

1. Double-click the downloaded file and follow the instructions that appear on the screen.

Windows Vista or later

You must run the installer as administrator:

1. Using Windows Explorer, browse to the folder where you downloaded the file.
2. Right-click the downloaded file and choose **Run as Administrator**.
3. Follow the instructions that appear on the screen.

**Note:** For Windows Vista or later, you might be required to install IBM SPSS Statistics - Essentials for R from an administrator account on your computer to enable use of the IBM SPSS Statistics - Integration Plug-in for R.

Pushing an installation

As an alternative to the manual installation described above you can push the installation to Windows computers. This is most useful for network administrators who need to install to multiple end users. Following is the form of the command line for pushing an installation:

```
<installer_name> /S /v/qn
```

where *<installer\_name>* is the name of the installer file for IBM SPSS Statistics - Essentials for R—for example: *SPSSStatisticsEssentialsForR\_22000\_win32.exe* .

**Note:** You must have administrator privileges to push an installation.

As part of the installation, any R packages required by the R examples will be automatically downloaded over the Internet if possible. This may take a few minutes.

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## Before you start using the IBM SPSS Statistics - Integration Plug-in for R

After you install IBM SPSS Statistics - Essentials for R, you will be able to start developing R applications with the IBM SPSS Statistics - Integration Plug-in for R. Complete documentation for the plug-in is available from the topic "Integration Plug-in for R" in the IBM SPSS Statistics Help system. It is also available in PDF form by choosing Programmability > R Plug-in from the IBM SPSS Statistics Help menu. You may also want to go through the tutorials available from Help>Working with R.

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## Accessing the R examples

IBM SPSS Statistics - Essentials for R includes a set of working examples of R extensions for IBM SPSS Statistics that provide capabilities beyond what is available with built-in SPSS Statistics procedures. All of the R extensions include custom dialogs and all but one (Rboxplot) also include an extension command. The extension commands can be run from SPSS Statistics command syntax in the same manner as any built-in command such as FREQUENCIES. You can generate command syntax for each extension command from the associated custom dialog.

*Table 1. Listing of R extensions.*

Menu location	Command name	Description
Analyze>Correlate>Heterogeneous Correlations	SPSSINC HETCOR	Calculate correlations between nominal, ordinal, and scale variables.
Analyze>Loglinear>Latent Class Analysis	STATS LATENT CLASS	Latent Class Analysis.

Table 1. Listing of R extensions (continued).

Menu location	Command name	Description
Analyze>Regression>Heckman Regression	STATS HECKMAN REGR	Estimate censored/truncated regression or switching regression.
Analyze>Regression>Quantile Regression	SPSSINC QUANTREG	Estimate one or more conditional quantiles for a linear model.
Analyze>Regression>Regression Relative Importance	STATS RELIMP	Relative importance measures for regression.
Analyze>Regression>Residual Heteroscedasticity Test	SPSSINC BREUSCH PAGAN	Estimate a linear model and perform a heteroscedasticity test.
Analyze>Regression>Robust Regression	SPSSINC ROBUST REGR	Estimate a linear regression model by robust regression, using an M estimator.
Analyze>Regression>Tobit Regression	SPSSINC TOBIT REGR	Estimate a regression model whose dependent variable has a fixed lower bound, upper bound, or both.
Analyze>Scale>Rasch Model	SPSSINC RASCH	Estimate a Rasch model for item response data.
Graphs>R Boxplot	No associated command	Generate boxplots using R graphics.

### Important:

- The Heterogeneous Correlations extension requires both the IBM SPSS Statistics - Integration Plug-in for R and the IBM SPSS Statistics - Integration Plug-in for Python. The IBM SPSS Statistics - Integration Plug-in for Python is included with IBM SPSS Statistics - Essentials for Python, which is installed by default with your IBM SPSS Statistics product.
- You might be required to set the SPSS Statistics locale to match the current SPSS Statistics output language to properly display extended characters in the output from these extensions. This action might be necessary even when you are working in Unicode mode. For example, if the output language is Japanese, then you might be required to set your SPSS Statistics locale to Japanese. You can set the locale from the **Language** tab on the **Options** dialog, which is accessed from **Edit > Options**.

### Notes

- Help for each of the R extensions is available from the **Help** button on the associated dialog box. The help is not, however, integrated with the SPSS Statistics Help system.
- Complete syntax help for each of the extension commands is available by executing the command and including the /HELP subcommand. For example:

SPSSINC HETCOR /HELP.

The command syntax help is not, however, integrated with the SPSS Statistics Help system and is not included in the *Command Syntax Reference*.

- If one of the Analyze menu items is not present in your IBM SPSS Statistics product, then please look on the Custom menu for the Analyze menu dialogs--for example, **Custom>Heterogeneous Correlations**.
- The dialogs were created with the Custom Dialog Builder in IBM SPSS Statistics. You can view the design for any of the dialogs and you can customize them using the Custom Dialog Builder. It is available from **Utilities>Custom Dialogs>Custom Dialog Builder**. To view the design for a dialog, choose **File>Open Installed** from within the Custom Dialog Builder.
- The implementation code (R source code file) and XML specification files for each of the R extension commands can be found in the extensions directory under the IBM SPSS Statistics installation directory.

- If you have specified alternate locations for extension commands with the `SPSS_EXTENSIONS_PATH` environment variable then the implementation and specification files will be located in the first writable location in that variable instead of in the extensions directory.
  - If you do not have access to the IBM SPSS Statistics installation directory and you did not specify `SPSS_EXTENSIONS_PATH`, then the files are installed to a general user-writable location, which is listed in the output from the `SHOW EXTPATHS` command. See the locations that are specified in the **Locations for extension commands** section.
  - You may need to set your SPSS Statistics locale to match the SPSS Statistics output language (OLANG) in order to display extended characters properly, even when working in Unicode mode. For example, if the output language is Japanese then you may need to set your SPSS Statistics locale to Japanese, as in `SET LOCALE='japanese'`.
  - Other extension commands that are not included in IBM SPSS Statistics - Essentials for R are available for download from the Download Extension Bundles dialog, accessible from **Utilities>Extension Bundles>Download and Install Extension Bundles**. The Download Extension Bundles dialog also displays any updates that are available for the extension commands included with IBM SPSS Statistics - Essentials for R in addition to updates for any other extension bundles that you installed.
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## Repairing an installation

If you uninstall and then reinstall the IBM SPSS Statistics 22 application or R 2.15, then please uninstall and then reinstall version 22 of IBM SPSS Statistics - Essentials for R.

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## Uninstalling IBM SPSS Statistics - Essentials for R components

1. Uninstall IBM SPSS Statistics - Essentials for R 22 from the Windows Control Panel.
2. Uninstall R version 2.15 from the Windows Control Panel, if desired.







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